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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,780	10/11/2001	Makoto Yonezawa	110831	7283

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EXAMINER

BARTH, VINCENT P

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 03/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/973,780

Applicant(s)

YONEZAWA, MAKOTO

Examiner

Vincent P. Barth

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Specification

1. The Specifications are objected to as failing to comply with 37 CFR 1.84(p)(5). In description of Figure 3, elements 4-6 appear to be misidentified in the Specification (pgs. 18-20). For example, element 4 is described in the Specifications as the stage, rather than a lens. Elements 10, 31 and 34 in Figure 3 are not discussed in the Specification, as well as the feature disposed above element 40 in Fig. 3 (which is also not numbered, as discussed below regarding the Drawings). The second light source in Figure 3 is misidentified as element 11 (pg. 15, para. 32, second sentence), rather than element as 12.

Drawings

2. The Drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following elements not mentioned in the description. The feature disposed above element 40 in Fig. 3 is not labeled. Moreover, several elements discussed above are misidentified in the Specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Referring to Claims 1, 3, 6-8, 11 and 12, the MPEP §2173.05(p) states that a single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph, citing *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990). Such claims are impermissibly drafted to include more than one statutory class of invention, and are thus hybrid claims. The majority of features in said independent claims are drawn to device structural elements, although the claim also includes a method of using the device which does not introduce any additional structural elements, thus creating a hybrid claim. The particular language which is drawn to a method of using the device, is that the speed of movement of the sample stage and the transfer speed of the image sensor are set relative to a time interval. However, the structural features which would accomplish said tasks have already been set forth in the claim, thus no new structural limitations result from such use. Specifically, the limitation of a drive control unit which controls the stage movement and the charge transfer rate has already been set forth fully in the portion of the claims describing the device. Therefore, adjusting the speeds of said features does not introduce any new structural limitations to the device. Accordingly, the claims are impermissibly drafted in hybrid form. Nevertheless, such method features would be permissible if any claims were drafted entirely in the form of method

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claims, rather than as hybrids. However, the claims have been discussed below as each may best be understood in the section entitled Comments, if the above hybrid difficulty were remedied.

6. Referring to Claims 2, 4, 5, 9, 10 and 13-16, the fourth paragraph of 35 U.S.C. §112 provides that, "A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers". Accordingly, Claims 2, 4, 5, 9, 10 and 13-16 inherit the §112 second paragraph rejection of Claims 1, 3, 6-8, 11 and 12 and are therefore rejected as well. However, the claims have been discussed below as each may best be understood in the section entitled Comments, if the above hybrid difficulty were remedied.

Comments

7. The following patent disclosures are of interest as they relate to the feature in Claims 1, 3, 6-8, 11 and 12 in which spatial filters are in the form of a plurality of slits with a predetermined pitch in a first direction and extending in a second direction perpendicular to said first direction. Moreover, since Claims 2, 4, 5, 9, 10 and 13-16 incorporate said feature based on dependency, the references are of interest to such claims as well. Shirashi, et al., U.S. Pat. No. 5,576,829 (19 Nov., 1996), discloses an apparatus for inspecting defects on a phase shifted mask in which in which spatial filters with a pitch are used (col. 27, lns. 25-37; col. 26, lns. 44-65; Fig. 20 elements 204, 204a-b and 205a-b; Figs. 24 and 25). However, the slits 204a and 204b are gated by shutters 205a and 205b, with separate light paths shown, thus the configuration in Fig. 20 can not be fairly described as spatial filters in the form of a plurality of slits with a predetermined pitch in a first direction and extending in a second direction perpendicular to said first direction. Murakami, et al., U.S. Pat. No. 6,381,356 (30 Apr., 2002, filed 20 Oct., 1997), describes a high

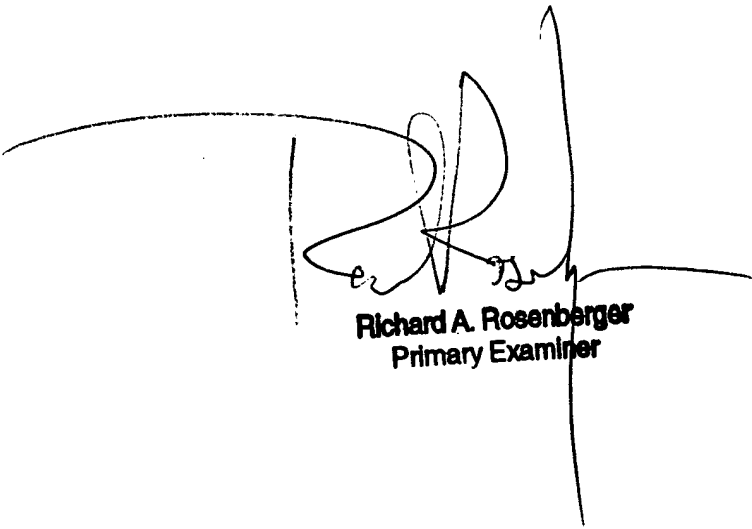
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precision apparatus for inspecting, *inter alia*, reticles, in which spatial filters are used in both reflection and transmission (see Fig. 2, element 113), and in which the beam is divided into a plurality of beams with identification markers in the form of polarity and intensity. However, Murakami does not disclose that such spatial filters are in the form of a plurality of slits with a predetermined pitch in a first direction and extending in a second direction perpendicular to said first direction. Hagiwara, U.S. Pat. No. 5,838,433 (17 Nov., 1998) discloses an apparatus for inspecting defects on a mask in which in which spatial filters are used in both reflection and transmission (see Figs. 5A-C, and col. 11, lns. 35-67). However, Hagiwara does not disclose that such spatial filters are in the form of a plurality of slits with a predetermined pitch in a first direction and extending in a second direction perpendicular to said first direction. Noguchi, et al., U.S. Pat. No. 6,400,454 (4 Jun., 2002, filed 24 Jan. 2000) discloses an apparatus for inspecting defects on semiconductors in which in which spatial filters are used in reflection measurements (see Fig. 1, and col. 8, lns. 13-17). However, Noguchi does not disclose that such spatial filters are in the form of a plurality of slits with a predetermined pitch in a first direction and extending in a second direction perpendicular to said first direction. Owen, et al., U.S. Pat. No. 5,377,004 (27 Dec., 1994), describes an optical measuring probed using spatial filters, and suggests configuring said spatial filters in the form of pinholes or slits (col. 3, ln. 24). However, Owen does not disclose that such spatial filters are in the form of a plurality of slits with a predetermined pitch in a first direction and extending in a second direction perpendicular to said first direction. Sakai, U.S. Pat. No. 5,075,864 (24 Dec., 1991), describes a vehicle speed sensing apparatus in which parallel slit spatial filters are used (col. 1, lns. 50-52), although said disclosure is non-analogous art.

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CONCLUSION

8. Applicants' Claims 1-16 are rejected based on the reasons set forth above.
9. Any inquiries concerning this communication from the examiner should be directed to Vincent P. Barth, whose telephone number is 703-605-0750, and who may be ordinarily reached from 9:00 a.m. to 5:30 p.m., Monday through Friday.
10. If attempts to reach the examiner prove unsuccessful, the examiner's supervisor is Frank G. Font, who may be reached at 703-308-4881.
11. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Richard A. Rosenberger
Primary Examiner